

Amendments to the Claims

Please amend the claims as indicated in the claim listing below. This listing will replace all prior versions of the claims in the application:

1. (Currently amended) A hydrocyclone, ~~comprising~~ comprising a body having an ~~inlet~~ a back wall at the ~~periphery~~ one end of the body, ~~an adjacent back wall~~ through which back wall there is a central overflow ~~connection~~ outlet, an inlet for intake of a stream of fluid, the inlet located at the periphery of the body proximate to the back wall, and a central underflow ~~connection~~ outlet at the opposite end of the body[;], where:

the ~~overflow~~ back wall ~~presenting an inclined face~~ presents an interior face with at least two ramps sloped relative to the back wall for redirecting the stream of fluid entering the hydrocyclone to flow axially along the hydrocyclone in at least two different paths having at least two axial velocity components for improved phase separation performance.

2. (Currently amended) The hydrocyclone of claim 1, further comprising:

said body having a longitudinal axis extending from said overflow ~~connection~~ outlet to said underflow ~~connection~~ outlet;

said ~~face~~ comprises at least two ramps ~~comprise~~ a radially inner ~~portion~~ ramp and a radially outer ~~portion~~ ramp, each defining a generally helical surface at a distinct slope extending from adjacent said inlet toward said underflow ~~connection~~ outlet.

3. (Currently amended) The hydrocyclone of claim 2, wherein:

said inner radial ~~portion~~ ramp extends at a shallower slope toward said underflow ~~connection~~ outlet than said outer radial ~~portion~~ ramp.

4. (Currently amended) The hydrocyclone of claim 3, wherein:
the slope of said outer radial ~~portion~~ ramp extends at more than twice the slope of that of said inner radial ~~portion~~ ramp.
5. (Currently amended) The hydrocyclone of claim 2, further comprising:
a wall disposed generally equidistant from said longitudinal axis and marking a boundary between said inner and outer ~~portions~~ radial ramps of said face.
6. (Canceled)
7. (Currently amended) The hydrocyclone of claim ~~6~~ 1, wherein:
the slope of each ~~radial-portion~~ ramp is greater than that of the ~~portion~~ ramp spaced radially inwardly thereof.
8. (Currently amended) The hydrocyclone of claim 1, wherein:
the ~~end~~ back wall face presents a generally smooth, continuous surface.
9. (Currently amended) The hydrocyclone of claim 1, wherein:
at least a portion of the ~~end~~ back wall face is inclined relative to ~~the~~ a longitudinal axis of the hydrocyclone extending from the overflow outlet to the underflow outlet.
10. (Currently amended) The hydrocyclone of claim 2, wherein:
said helical surfaces ~~are~~ of the ramps have a flat cross-section.
11. (Currently amended) The hydrocyclone of claim 2, wherein:
said helical surfaces ~~are curved~~ of the ramps have a curved cross-section.